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## **Job Crafting via Decreasing Hindrance Demands: The Motivating Role of Interdependence Misfit and the Facilitating Role of Autonomy**

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Job crafting theory suggests that misalignment between an employee's preferred and actual amount of job characteristics acts as a motivational trigger for job crafting. We test this unexplored, yet key proposition underlying job crafting theory. To do so, however, we take a more comprehensive misfit perspective than previously applied, evaluating person-job undersupply and oversupply. We propose that task interdependence misfit motivates a reductive form of job crafting, decreasing hindrance demands. We also propose that low autonomy mitigates the misfit to decreasing hindrance demands relationship. To empirically evaluate this direction, we employ moderated polynomial regression and response surface analysis. Study 1 ( $N = 159$  English-speaking respondents) findings suggest that task interdependence misfit (both undersupply and oversupply) is positively related to decreasing hindrance demands. Study 2 ( $N = 363$  Dutch-speaking respondents) findings replicate and support our misfit hypothesis. Further, as expected, low levels of autonomy neutralize the relationship between task interdependence misfit and decreasing hindrance demands. Theoretical and practical implications regarding the misfit-as-motivation hypothesis, and the simultaneous investigation of job crafting facilitators (i.e., autonomy) and motivators (i.e., misfit) are discussed.

### INTRODUCTION

The employee-initiated approach to work redesign, called job crafting, refers to self-initiated changes to work tasks and social relationships in order to balance job demands with job resources (Tims & Bakker, 2010; Tims,

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Bakker, & Derks, 2012). Job crafting theory suggests that misfit between an employee's preferred and actual amount of job characteristics acts as a motivational trigger for job crafting (Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001). This perspective draws upon person-environment fit theory (specifically, person-job, need-supply fit) (Cable & DeRue, 2002), which suggests that misalignment between personal needs and job supplies motivates job crafting behaviors. Although the misfit-as-motivation perspective is central to job crafting theory (Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001), there are no empirical investigations to date, as most studies examined work characteristics as facilitators of job crafting (see Lazazzara, Tims, & De Gennaro, in press; Zhang & Parker, 2019). Additionally, as we discuss next, prior conceptualizations of misfit as it relates to job crafting are incomplete.

According to person-environment fit theory, there are two forms of misfit: when job characteristic supply is less than the need (i.e., undersupply) and when job characteristic supply exceeds the need (i.e., oversupply). To date, job crafting research acknowledges misfit in the form of undersupply. This perspective makes sense if focusing on the three *expansive- or approach-oriented* forms of job crafting, which include increasing challenging job demands (e.g., asking for more responsibilities), increasing structural job resources (e.g., deciding on my own how I do things), and increasing social job resources (e.g., asking for feedback and advice) (Tims & Bakker, 2010; Tims et al., 2012). Indeed, increasing challenging job demands, structural job resources, or social job resources should overcome the undersupply of complex work, autonomy, or social support, respectively.

Missing from the job crafting literature is a comprehensive, multi-directional (i.e., undersupply and oversupply) application of person-environment fit as it relates to the misfit-as-motivation arguments of job crafting theory. Failure to consider both undersupply and oversupply is theoretically and practically problematic. Theoretically speaking, failure to clearly articulate different misfit scenarios could perpetuate overly simplistic conceptualizations and investigations of the misfit-as-motivation perspective of job crafting. From a practical standpoint, assuming that misfit only entails undersupply encourages managers to offer employees more of a job characteristic, which may increase rather than solve the source of misfit.

In this study we therefore solely focus on the fourth form of job crafting, decreasing hindrance demands (DHD). DHD is a *reduction- or avoidance-oriented* form of job crafting that focuses on minimizing work stressors (Bruning & Campion, 2018; Demerouti & Peeters, 2018; Zhang & Parker, 2019). Thus, DHD serves as "a health-protecting coping mechanism" (Demerouti, 2014, p. 239) that could stem from either form of misfit. Unlike approach-oriented

job crafting, DHD has less to do with altering tasks or relationships to overcome undersupply misfit, and more to do with freeing up psychological resources available to deal with the strain that can stem from either undersupply or oversupply misfit. It is therefore the most appropriate form of job crafting to investigate in a model testing the effect of both undersupply and oversupply misfit. DHD has primarily been evaluated as a dimension of the higher-order job crafting construct, making it unclear what facilitates or motivates DHD. Interestingly, in line with our arguments, a recent review of qualitative job crafting studies (Lazazzara et al., in press), reports that motivations for job crafting can be proactive (i.e., stimulated by a motivation to reach a desirable goal) or reactive (i.e., stimulated by the need to cope with adversity at work). Notably, reactive motives were most often referenced as triggers of avoidance crafting (e.g., DHD), which illustrates that individuals who experience a misfit at work may be most likely to engage in DHD as compared to those who have proactive motives for job crafting. In summary, the primary purpose of this manuscript is to: (a) empirically investigate the misfit-as-motivation hypothesis; and (b) investigate the misfit hypothesis using a more comprehensive, multi-directional conceptualization of misfit.

To illustrate both forms of misfit (i.e., undersupply and oversupply), it is important to investigate a job characteristic that is amenable to the undersupply and oversupply perspective of misfit. According to Warr's (1990, 2011) vitamin model, job characteristics—similar to vitamins—can either have a constant, beneficial effect (e.g., compensation, physical security) or a detrimental effect once it reaches a specific threshold (e.g., autonomy, interaction with others). Aligning with Warr's vitamin model (1990), we selected a job characteristic that is expected to have a detrimental effect at both higher and lower levels, which coincides with the potential for oversupply and undersupply misfit. Specifically, we focus on task interdependence, defined as “the degree to which taskwork is designed so that members depend upon one another for access to critical resources and create workflows that require coordinated action” (Courtright, Thurgood, Stewart, & Pierotti, 2015, p. 1829).

We chose this vitamin model job characteristic for several reasons. First, job crafting theory suggests that employees make self-initiated changes when one's sense of control is violated (Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001), of which task interdependence has direct implications. Task interdependence affixes employees to a defined amount of formal interaction and reciprocal accountability and responsibility with colleagues (Kiggundu 1983). Too much task interdependence can inhibit employees' ability to engage in self-directed action. Too little task interdependence can cause employees to feel disconnected from others, limiting their ability to understand and influence others (Baumeister & Leary, 1995).

The secondary purpose of this manuscript is to differentiate between variables that motivate versus facilitate DHD. Although the misfit-as-motivation argument is central to job crafting theory (Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001), the majority of research has focused on facilitators of job crafting. For example, research suggests that employees high in self-efficacy beliefs (Tims, Bakker, & Derks, 2014) and proactive personalities (Bakker, Tims, & Derks, 2012; Plomp, Tims, Akkermans, Khapova, Jansen, & Bakker, 2016) are more likely to job craft. Research also suggests that employees working in more autonomous (Leana, Appelbaum, & Shevchuk, 2009) or challenging (Petrou, Demerouti, Peeters, Schaufeli, & Hetland, 2012) jobs are more likely to job craft because they perceive that they have more opportunities to do so. Collectively, this research helps clarify the actor- and context-focused variables that facilitate job crafting, but does not speak to the underlying motivation to job craft. In our study, we integrate both the motivation and facilitation perspective by including autonomy as a facilitator of the motivational person-job misfit process.

Autonomy entails the extent to which an individual has discretion over work processes (Humphrey, Nahrgang, & Morgeson, 2007). Autonomy is thought to facilitate job crafting because employees have more leeway in making work-related adjustments and less oversight to implement those adjustments (Tims et al., 2012; Wrzesniewski & Dutton, 2001). Although prior work primarily investigates the direct effect of autonomy on job crafting (e.g., Berg, Wrzesniewski, & Dutton, 2010; Leana et al., 2009; Lyons, 2008), we align our model with the original propositions of job crafting theory (Tims et al., 2012; Wrzesniewski & Dutton, 2001), and position autonomy as a situational moderator of the relationship between need-supply task interdependence misfit and DHD.

The primary contribution of this paper is to job crafting theory. Specifically, this study simultaneously investigates two central tenets of job crafting theory; that misfit motivates job crafting, and that structural characteristics (i.e., autonomy) facilitate the motivational processes underlying job crafting. Additionally, in our investigation of the misfit-as-motivation hypothesis, we illustrate that misfit is multi-directional, such that undersupply and oversupply can motivate DHD. This study also has broader implications for work design research. In Pierce and Aquinis' (2013) elaboration of the too-much-of-a-good-thing (TMGT) effect, they suggest that too much of a specific job characteristic can be detrimental. This curvilinear (i.e., inverted U-shaped) perspective aligns with Warr's (1990, 2011) vitamin model, and has generally been supported with respect to job enrichment-oriented constructs (e.g., Champoux, 1980; De Jonge & Schaufeli, 1998; Karasek, 1979; Xie & Johns, 1995). However, the vitamin model approach assumes that individual differences are relatively unimportant compared to environmental characteristics.

We illustrate the importance of incorporating individual characteristics into curvilinear models of job characteristics. Specifically, we highlight that individual needs for task interdependence plays a role in dictating when the TMGT effect exists. For example, individuals who need high levels of task interdependence may never experience a detrimental effect, while individuals who need low levels may experience reduced well-being at relatively modest levels of task interdependence supply.

We address these potential contributions through two studies. In Study 1, we test the effect of need-supply task interdependence misfit on DHD. In Study 2, we replicate Study 1, and incorporate autonomy to evaluate its moderating role on the effect of need-supply misfit. To test these hypotheses we employ moderated polynomial regression and response surface analysis (Edwards, 1994; Edwards & Parry, 1993).

## THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

### Task Interdependence

Task interdependence is considered a work characteristic of critical importance, as it ultimately determines the amount of coordination and cooperation necessary to accomplish work goals (Kozlowski & Bell, 2003). Since Thompson's (1967) introduction of interdependence in the organizational literature, conceptualizations have been wide-ranging. In this study, we are interested in *structural interdependence*, which refers to social-structural features that define the interconnectedness of organizational members (Wageman, 1999). This is in contrast to *behavioral interdependence*, which entails the actual level of interaction between organizational members (Wageman, 1999). There are two forms of structural interdependence, namely outcome interdependence and task interdependence. *Outcome interdependence* is concerned with the extent to which performance expectations are framed as group-oriented, or performance outcomes (e.g., rewards, feedback) are allocated at the group-level (Courtright et al., 2015; Wageman, 1999). The focus of this study, *task interdependence*, entails depending upon one another for access to critical resources or creating workflows that require coordinated action (Courtright et al., 2015; Wageman, 1999). Notably, task interdependence is bi-directional, such that an employee can depend upon colleagues to do his or her work (received interdependence) and colleagues can depend upon him or her to do their work (initiated interdependence) (Kiggundu, 1983). Prior work has taken a typology approach to task interdependence, highlighting that task interdependence can be pooled (independent), sequential (one-way), reciprocal (two-way), or intensive

(simultaneous and multi-directional) (Saavedra, Earley, & Van Dyne, 1993). In this study, we evaluate task interdependence along a continuum, whereby task interdependence can be anchored at the low end with pooled interdependence and at the high end with intensive interdependence.

## The Job Demands-Resources Perspective of Job Crafting and Person-Job Misfit Theory

Job Demands-Resources (JD-R) theory suggests that work characteristics can be categorized as either job demands or job resources (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Physical, psychological, social, or organizational factors that cause psychological strain, because they exceed employees' adaptive capacity, are categorized as job demands. Alternatively, job resources entail such factors that counteract the ill effects of demands, or facilitate additional resource accumulation (Crawford, LePine, & Rich, 2010). The JD-R perspective of job crafting suggests that employees will make task and relationship changes in order to garner additional job resources or challenges or rid themselves of hindering job demands (Tims & Bakker, 2010). Employees engage in reducing hindrance demands when they experience an unpleasant reaction to a stressor, which incentivizes them to minimize the negative emotional impact of the stressor (Folkman, Lazarus, Gruen, & DeLongis, 1986) or avoid the strain associated with it (Bruning & Campion, 2018; Demerouti & Peeters, 2018). For example, employees may make changes that reduce the emotional or mental intensity of their work, perhaps by staying away from unrealistic or emotionally draining colleagues (Tims et al., 2012). Further, employees may also avoid difficult or demanding tasks, decisions, or conversations (Berg et al., 2010). In so doing, employees can protect or maintain psychological resources (Hobfoll, 2001).

According to person-job fit theory, employees are more likely to have enhanced well-being when their personal characteristics align with their job characteristics (Cable & DeRue, 2002). Need-supply fit is a type of person-job fit specifically concerning the alignment of personal needs and job supplies of a commensurate workplace factor (e.g., task interdependence). Thus, needs-supplies fit represents the extent to which the job characteristics and associated rewards satisfy employee preferences (Resick, Baltes, & Shantz, 2007). Not receiving enough task interdependence (i.e., undersupply) is considered a stressor because it thwarts feeling as if one has the interconnections necessary to understand and influence constituents of their work environment (McClelland, 1985). Alternatively, receiving too much task interdependence (i.e., oversupply) is considered a stressor because it thwarts feeling as if one can engage in self-determined action (Deci & Ryan, 2000).



## Task Interdependence Misfit

Deficiency scenarios entail employees high in interdependence needs working in low interdependence jobs. If employees prefer to be working with and through others to produce work deliverables, yet are not offered these opportunities, they may feel unconnected and uninformed of organizational initiatives (Wong & Campion, 1991). Employees who feel excluded are likely to react in kind, limiting their contributions to the organization by minimizing their efforts (Blau, 1964), perhaps through reducing hindrances. Moreover, receiving less interdependence than preferred may result in those who need interdependence feeling that they are being excluded, which threatens people's need for control (Hutchison, Abrams, & Christian, 2007) and triggers stress and withdrawal (Baumeister, Twenge, & Nuss, 2002; Twenge, Catanese, & Baumeister, 2002; Williams, 2007). In line with these arguments, studies show that thwarted control needs manifest as psychological strain (Baard, Deci, & Ryan, 2004; Ilardi, Leone, Kasser, & Ryan, 1993), which is likely to trigger resource conservation in the form of DHD (Crawford et al., 2010).

The alternative scenario, excess interdependence, occurs when employees low in interdependence needs are embedded in jobs with high interdependence requirements. In interdependent jobs, employees are reciprocally dependent upon the abilities, productivity, and performance of each other (Wong & Campion, 1991). Such excess interdependence may cause frustration because employees low in interdependence needs feel that they are forced to rely upon the unpredictable behavior of others, making it difficult to control their work environment (Mainiero, 1986; Martin & Wall, 1989; Schaubroeck, Ganster, Sime, & Ditman, 1993). Excessive interdependence also entails others being reliant upon the work product of a focal employee. This unwanted responsibility and accountability towards others can cause unneeded pressure (Martin & Wall, 1989) which increases feelings of limited control (e.g., Wong, DeSanctis, & Staudenmayer, 2007).

In both scenarios, employees are likely to initiate coping mechanisms that allow them to protect and maintain psychological resources (Folkman et al., 1986). They can do so by proactively decreasing work-related hindrances (Tims & Bakker, 2010; Vogel, Rodell, & Lynch, 2016). For example, in task interdependence deficiency scenarios, employees could proactively avoid highly independent tasks that require long periods of concentration. In excess task interdependence scenarios, employees could proactively avoid energy-draining colleagues or customers in order to preserve psychological resources. In support, using an interview-based, qualitative approach, Bruning and Campion (2018) found that employees engage in "avoidance crafting" such that they withdraw when experiencing misfit.



When an employee is embedded in a work environment that matches their interdependence preferences, the motivation for employees to engage in DHD should decline. Research suggests that employees experience higher levels of well-being when they are able to interact with co-workers in ways they find comforting and helpful (Sheldon, Ryan, & Reis, 1996). When employees prefer working with and through others and they encounter opportunities to do so, they are engaging in rewarding social exchanges with colleagues (Blau, 1964). Similarly, when employees high in interdependence need are given the opportunity to work with others towards interconnected goals and co-produce deliverables, they experience their work as more fulfilling (Spreitzer, 1995). Alternatively, if employees prefer less interdependent work and they are supplied with a commensurate amount, they fulfill their preference for being self-sustaining and self-competent because their work output is solely dependent upon their individual production (Deci & Ryan, 2000). These employees also fulfill their preference for self-determined action because they are personally responsible for their work and do not need to accomplish work through interaction with others (Gagne & Deci, 2005). In summary, when employees perceive that their job requires a specific amount of interdependence that coincides with their preferred amount, they have less need to engage in reducing hindrance job demands. We therefore offer the following hypothesis.

*Hypothesis 1:* Decreasing hindrance demands increases as the discrepancy between the need for task interdependence and the supply of task interdependence increases.

## THE MODERATING ROLE OF AUTONOMY

Job crafting theory suggests that autonomy plays a critical role in dictating whether individuals with the motivation to job craft will actually engage in job crafting behavior (Tims et al., 2012; Wrzesniewski & Dutton, 2001). The motivation to job craft is only likely to translate into actual job crafting behavior when employees feel they are capable of successfully engaging in decreasing hindrances. Employees with high levels of autonomy have discretion in how they pursue and accomplish their work, giving them more confidence (Spreitzer & Sonenshein, 2003) and more leeway (Keltner, Gruenfeld, & Anderson, 2003) to act when experiencing task interdependence misfit. Additionally, high autonomy employees have less oversight from authority figures, which gives them the psychological space needed to enact changes without fear of being questioned (Berg et al., 2010; Dierdorf & Jensen, 2017). Alternatively, because employees with low levels of autonomy have less discretion and more oversight they are less likely to perceive that reacting to

misfit by decreasing hindrance demands is a viable option (Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001). In total, we hypothesize that the previously proposed task interdependence misfit to DHD relationship will be dependent upon the extent to which the employee has autonomy.

*Hypothesis 2:* Autonomy moderates the relationship between task interdependence misfit and decreasing hindrance demands such that the positive relationship remains when autonomy is high, but is neutralized when autonomy is low.

## STUDY 1 METHOD

### Sample and Procedure

Study 1 data were collected from a sample of English-speaking, full-time working adults using Amazon.com's Mechanical Turk. We posted 175 human intelligence tasks ("hits"), offering participants \$0.50 for completing a three-minute survey. We received a total of 168 surveys, as seven of the hits were accepted but no survey was submitted. As suggested by Meade and Craig (2012), surveys were excluded if respondents did not correctly answer one of three attention check questions. After excluding nine such surveys, the final sample consisted of 159 (94.64%) employees who were predominantly male (58%) with a mean age of 29.10 years, and an average of 4.40 years of experience with their current employer.

### Measures

Employees responded to a three-item task interdependence scale adapted from the Work Design Questionnaire (WDQ; Morgeson & Humphrey, 2006). The three items align with Kiggundu's (1981) theory of task interdependence and include an initiated interdependence item ("*Having other workers depend on my work*"), a received interdependence item ("*Depending upon the work of others*"), and a general interdependence item ("*Being interdependent with others at work*"). Notably, the items are specific to task interdependence opposed to outcome interdependence, as they focus on the work itself (e.g., input and process) opposed to the outcomes of the work (e.g., goals, rewards) (Courtright et al., 2015; Wageman, 1999). Similar to prior research (e.g., Edwards & Rothbard, 1999; Shaw & Gupta, 2004), we used Edwards and Cable's (2009) methodology for evaluating needs-supply fit from an atomistic perspective, which is necessary for polynomial regression analysis (Edwards, Cable, Williamson, Lambert, & Shipp, 2006). Specifically, the three task interdependence items are evaluated at two different time points in the survey; first with a stem prompting a needs

response, and later with a stem prompting a supplies response (Edwards & Cable, 2009). For needs, employees were asked to indicate “How much is the right amount for you” ( $\alpha = .84$ ). For supplies, employees were asked to indicate “How much is the following present in your work?” ( $\alpha = .74$ ). Both needs and supplies used a 7-point response scale ranging from 1 (*none*) to 7 (*a very great amount*).

For job crafting, we used Petrou et al.’s (2012) four-item, modified version of Tims et al.’s (2012) decreasing hindrance demands dimension ( $\alpha = .80$ ). An example item includes “*Making sure that my work is mentally less intense*”. Items were rated on a 7-point response scale ranging from 1 (*never*) to 7 (*very frequently*).

We controlled for job level for several reasons. First, it is important to differentiate the influence of autonomy, a work design characteristic concerned with tasks and work processes, and the degree of power (Keltner et al., 2003) and authority (Weber, 1947) someone has over others given their position within an organizational hierarchy. Second, job level influences the extent to which employees experience burnout (Kim, Ra, Park, & Kwon, 2017), which may influence reactions to misfit. Third, prior research suggests that higher-ranking employees may experience job crafting differently than lower ranking employees (Berg et al., 2010). We relied upon the framework used by the Occupational Information Network (O\*Net) to create a job level variable. The O\*Net suggests that job level is a product of three components: education (i.e., highest degree obtained), training (i.e., number of years of on-the-job training necessary to learn the position), and experience (i.e., number of years of experience necessary to earn the position). While none of the three individually are predictive of authority within organizations, together they offer a reflective construct with predictive value (Apple, 1982; Schmidt, Hunter, & Outerbridge, 1986). We therefore created 5-point scales for each of these components and used the average as the job level control.

## Analytical Approach

We tested Hypothesis 1 using polynomial regression analyses and response surface modeling (Edwards, 1994; Edwards & Parry, 1993). Polynomial regression is ideal for testing our misfit hypotheses because it allows for a simultaneous evaluation of the linear and curvilinear effects of task interdependence need and supply on DHD (Edwards, 1994). We first scale-centered task interdependence need ( $P$ ) and task interdependence supply ( $E$ ), and then used these centered scores to calculate a squared term for  $P$  ( $P^2$ ), a squared term for  $E$  ( $E^2$ ), and an interaction term for  $P$  and  $E$  ( $P \times E$ ). Before continuing, we conducted a test to confirm that polynomial regression was appropriate. Specifically, there is evidence of a polynomial effect when

there is a statistically significant change in the  $F$  value when comparing the five polynomial terms (i.e.,  $P$ ,  $E$ ,  $P^2$ ,  $P^*E$ , and  $E^2$ ) to the linear terms (i.e.,  $P$  and  $E$ ). If significant, DHD is then regressed on the five polynomial terms, resulting in the equation below.

$$Z = b_0 + b_1P + b_2E + b_3P^2 + b_4P^*E + b_5E^2 + e$$

The coefficients from these analyses are then used to conduct response surface tests and examine the three-dimensional response surface (see Edwards, 1994; Edwards & Parry, 1993; Shanock, Baran, Gentry, Pattison, & Heggstad, 2010). More specifically, in this study, we are interested in the curvature along the incongruence line, which indicates levels of DHD as task interdependence need and supply become more discrepant (i.e., incongruent). Hypothesis 1 is supported when the curvature along the incongruence line ( $a_4 = P^2 - P^*E + E^2$ ) is positive and significantly different from zero. If  $a_4$  is positive, DHD increases when task interdependence need ( $P$ ) exceeds supply ( $E$ ) and when task interdependence supply ( $E$ ) exceeds need ( $P$ ). Graphically, a positive  $a_4$  illustrates a U-shaped relationship. Starting at the left corner of the surface plot (zone of oversupply incongruence), DHD should start high and then decrease until it reaches a plateau along the line of congruence (from the front to the back of the plot), and then increase when moving towards the right corner of the surface plot (zone of undersupply incongruence). For all analyses, we used 10,000 bootstrap estimates (with replacement) and the distributions of these coefficients were examined using a 95% bias-corrected confidence interval. All analyses (Study 1 and 2) were conducted using IBM SPSS Statistics 25.

## STUDY 1 RESULTS

Prior to testing our hypotheses, we conducted a series of confirmatory factor analyses (CFA) with maximum likelihood estimations, evaluating the comparative fit index (CFI), standardized root mean square residual (SRMR), and root mean square error of approximation (RMSEA). The expected three-factor model ( $\chi^2(32) = 91.70$ ,  $p < .01$ , CFI = 0.92, SRMR = .07, RMSEA = .11) offered a significant improvement in chi-squares over alternative models (see Table 1). Additionally, the range of standardized factor loadings was between .57 and .89 and the range of error variance was between .04 and .09. Although the hypothesized model met adequate fit cut-off values for CFI ( $\geq .90$ ) and SRMR ( $\leq .08$ ), it was slightly higher than the adequate fit cut-off value for RMSEA ( $\leq .10$ ) (Hooper, Coughlan, & Mullen, 2008; Hu & Bentler, 1999). We therefore evaluated the average variance extracted (AVE: Fornell & Larcker, 1981) for each variable. The AVE estimates

TABLE 1  
Results for Confirmatory Factor Analysis

<i>Model</i>	$\chi^2$	<i>df</i>	$\Delta\chi^2 (\Delta df)$	<i>CFI</i>	<i>SRMR</i>	<i>RMSEA</i>
<i>Study 1</i>						
Hypothesized 3-factor model	91.70**	32		.92	.07	.11
2-factor model (INT need and INT supply combined)	124.82**	34	33.12** (2)	.87	.08	.13
1-factor model	199.11**	35	107.41** (3)	.77	.10	.17
<i>Study 2</i>						
Hypothesized 6-factor model	369.78**	179		.92	.08	.05
5-factor model (INT need and INT supply combined)	768.56**	184	398.78** (5)	.77	.16	.09
5-factor model (proactivity and job crafting combined)	692.40**	183	322.62** (4)	.80	.15	.09
4-factor model (INT need, INT supply, and AUT combined)	1496.90**	187	1127.12** (8)	.48	.22	.14
1-factor model	1868.61**	189	1498.83** (10)	.33	.24	.16

*Notes:* Study 1 *N* = 159. Study 2 *N* = 363. Study 1 alternative models were compared to hypothesized 3-factor model. Study 2 alternative models were compared to hypothesized 6-factor model. CFI = comparative fit index. SRMR = standardized root mean square residual. RMSEA = root mean square error of approximation. INT = interdependence. AUT = autonomy.

\*\**p* ≤ .01.

the variance explained by a latent construct; AVE values above 0.50 indicate that the explained variance exceeds variance due to measurement error. The AVE values can then be used to evaluate discriminant validity among the study variables. Sufficient discriminant validity exists if the square root of the AVE of each construct exceeds the zero-order correlations between the latent constructs (Gefen & Straub, 2005). The AVE for each construct was greater than 0.50, and the square root of the AVE values exceeded the zero-order correlations among constructs offering evidence of discriminant validity (see Table 2). Given the combination of adequate fit with the satisfactory AVE analyses, we moved forward with testing our model. Table 2 summarizes the zero-order correlations among the study variables.

The results (see Table 3, Model 1 versus Model 2) indicate that the change in *F* value when including the higher-order terms (i.e.,  $P^2$ ,  $P^*E$ ,  $E^2$ ) was statistically significant ( $\Delta F = 3.03$ ,  $p = .031$ ). This suggests that evaluating the joint effects of need and supply using polynomial regression is superior to evaluating the direct effects. Next, as expected, the results illustrate that the curvature

TABLE 2  
Descriptive Statistics and Zero-Order Correlations for Study 1 and Study 2

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1. Job Level		.09	.17**	-.09	.35**	.18**
2. Interdependence Need	.01		.48**	.17**	.02	.06
3. Interdependence Supply	.08	.65**		.08	.13*	.10
4. Job Crafting	-.10	.56**	.61**		-.24**	-.05
5. Autonomy						.29**
6. Proactive Personality						
Study 1 M	2.58	5.38	5.48	5.50		
Study 1 SD	.52	.98	.89	.92		
Study 1 AVE		.97	.85	.85		
Study 1 AVE SR		.94	.92	.92		
Study 2 M	1.51	3.52	4.15	1.94	5.32	5.19
Study 2 SD	.75	1.03	1.19	.63	1.15	.75
Study 2 AVE		.84	.93	.70	.96	.57
Study 2 AVE SR		.92	.97	.84	.98	.76

*Notes:* Study 1 below the diagonal. Study 2 above the diagonal. Study 1  $N = 159$ . Study 2  $N = 363$ . M = mean. SD = standard deviation. AVE = average variance extracted. AVE SR = square root of the average variance extracted.

\*\* $p \leq .01$ ; \* $p \leq .05$ .

along the line of incongruence was positive and significant ( $a_4 = .72$ , 95% CI [.640, .890]). The surface plot (see Figure 1) illustrates that DHD increases when there are excess amounts of task interdependence (i.e., moving from the middle of the plot to the left side of the plot) and when there are deficient amounts of task interdependence (i.e., moving from the middle of the plot to the right side of the plot). These results offer support for Hypothesis 1.

## STUDY 2 METHOD

### Study 2 Sample, Procedures, and Measures

We sought to replicate the findings of Study 1 while incorporating four key differences. First, we collected data using a field study of full-time employees across different organizations. Participants were recruited through the networks of premaster students who participated in a Research Methods course. Students received instructions to recruit employees of different backgrounds and ages (e.g., parents, family members, coworkers at supplemental jobs) and received training in collecting data, research ethics, and data analysis. Participation was voluntary and anonymous. The students were instructed to invite 10 employees each, resulting in approximately 600

TABLE 3  
Polynomial Regression and Moderated Polynomial Regression Analysis of Needs-Supply Interdependence Incongruence on Decreasing Hindrance Demands

	Study 1		Study 2							
	M1	M2	M3	M4	M5	M6	Low AUT		High AUT	
Job Level	-.24*	-.24*	-.09	-.08	-.02	-.04	-.04	-.04	-.04	-.04
Proactive Personality			-.04	-.03	.02	.03	.03	.03	.03	.03
INT Need	.25**	.35**	.11*	.15**	.14**	.19**	.19**	.19**	.19**	.19**
INT Supply	.46**	.43**	.01	-.05	-.03	-.04	-.04	-.04	-.04	-.04
INT Need Squared		.25*		.04	.05*	.06	.07	.07	.07	.07
INT Need × INT Supply		-.29*		.11**	-.10**	-.10**	-.10**	-.10**	-.10**	-.10**
INT Supply Squared		.18†		.01	.01	.03	.03	.03	.03	.03
AUT					-.13**	-.17**	-.17**	-.17**	-.17**	-.17**
INT Need × AUT					-.06*	-.06*	.26**	.12*	.12*	.12*
INT Supply × AUT					-.03	-.03	-.01	-.08	-.08	-.08
INT Need Squared × AUT					-.01	-.01	.07	.05	.05	.05
INT Need × INT Supply × AUT					-.03	-.03	-.07	-.14*	-.14*	-.14*
INT Supply Squared × AUT						.03	-.01	.07†	.07†	.07†
F	55.11**	24.72**	3.77**	3.59**	5.50**	4.76**				
ΔF		3.03*		3.25**		3.29**				
R <sup>2</sup>	.41	.45	.04	.07	.11	.15				
ΔR <sup>2</sup>		.03		.03		.04				
a <sub>1</sub>		.78**		.10**		.15**		.25**		.05
a <sub>2</sub>		.14*		-.06*		-.01		.00		-.02
a <sub>3</sub>		-.08		.20*		.23**		.27**		.20†
a <sub>4</sub>		.72*		.16**		.19**		.13		.25*

Notes: Study 1 N = 159, Study 2 N = 363. Entries represent unstandardized coefficients. M = Model. INT = task interdependence. AUT = autonomy. a<sub>1</sub> = slope (P + SP) along line of congruence (P = SP). a<sub>2</sub> = curvature (P<sup>2</sup> + P\*SP + SP<sup>2</sup>) along line of congruence (P = E). a<sub>3</sub> = slope (P - E) along line of incongruence (P = -E). a<sub>4</sub> = curvature (P<sup>2</sup> - P\*E + E<sup>2</sup>) along line of incongruence (P = -E). \*\*p ≤ .01; \*p ≤ .05; †p ≤ .10.



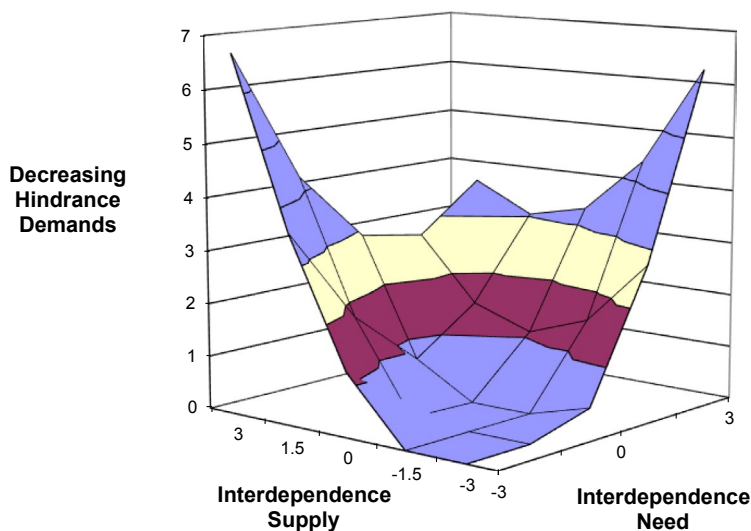


FIGURE 1. Study 1 task interdependence incongruence on decreasing hindrance demands. [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

invited employees. Importantly, in the ethics part of the course, the severity of falsified data was emphasized and students were informed that while there would be a severe penalty for falsified data, there would be no penalty for not obtaining enough data. A total of 469 employees responded (78.17%). Compared to full-time employees, part-time and/or temporary employees are less involved in their jobs (Thorsteinson, 2003), making them less likely to consider or attempt proactive job changes. Thus, we excluded part-time and/or temporary employees, resulting in a final sample of 363 (60.50%) employees. We used the translation-back translation procedure (Brislin, 1970) in order for all participants to complete the surveys in Dutch. The sample consisted of 62 percent females, with a mean age of 39.70 years, and an average of 6.98 years of experience with their current employer.

A second difference is that we used Tims et al.'s (2012) six-item decreasing hindrance demands dimension ( $\alpha = .78$ ) to measure job crafting, which offers more robust construct validity findings than the version used in Study 1.<sup>1</sup> Third, we controlled for proactive personality ( $\alpha = .71$ ) using Bateman and Crant's (1993) six-item measure.<sup>2</sup> Job crafting is considered a proactive behavior (Tims et al., 2012), thus, individuals with proactive tendencies may be inclined to job craft given their underlying disposition (Bakker et al., 2012),

<sup>1</sup> The findings of Study 2 are the same when using the job crafting measure used in Study 1.

<sup>2</sup> The findings are the same when excluding proactive personality as a control variable.

regardless of their amount of task interdependence need or supply. Indeed, proactive personality is a known correlate of job crafting (Bakker et al., 2012). Fourth, we evaluated the moderating effect of autonomy using a three-item autonomy scale from the WDQ (Morgeson & Humphrey, 2006) ( $\alpha = .84$ ). We used the same task interdependence need ( $\alpha = .74$ ) and supply ( $\alpha = .84$ ) scales used in Study 1.

## Study 2 Analytical Approach

We used the same analytical approach used in Study 1 to test Hypothesis 1. To test Hypothesis 2 we used Edwards' (1996) approach for moderated polynomial regression analyses. We created a moderated polynomial regression model that included the control variables, the original polynomial terms (i.e.,  $P$ ,  $E$ ,  $P^2$ ,  $P^*E$ ,  $E^2$ ), the moderator variable (i.e., autonomy:  $AUT$ ), and the interaction of the moderating variable with each of the original polynomial terms (see the equation below).

$$Z = b_0 + b_1P + b_2E + b_3P^2 + b_4P^*E + b_5E^2 + b_6AUT + b_7P^*AUT + b_8E^*AUT + b_9P^2^*AUT + b_{10}P^*E^*AUT + b_{11}E^2^*AUT + e$$

There is evidence of a significant moderating effect when introducing the five new product terms into the model produces a statistically significant change in the  $F$  value. Additionally, the polynomial coefficients containing autonomy as interaction terms are evaluated at low ( $-1$  SD) and high ( $+1$  SD) levels of autonomy (Edwards, 1996; Edwards & Rothbard, 1999). Hypothesis 2 is supported when the positive curvature along the line of incongruence remains significant when autonomy is high, but is no longer significant when autonomy is low.

## STUDY 2 RESULTS

CFAs indicate that the hypothesized model fit was adequate ( $\chi^2(32) = 91.70$ ,  $p < .01$ , CFI = 0.92, SRMR = .08, RMSEA = .05), and better than alternative models (see Table 1). Additionally, the range of standardized factor loadings was between .42 and .95 and the range of error variance was between .03 and .10. Similar to Study 1, the AVE for each construct was greater than 0.50, and the square root of the AVE values exceeded the zero-order correlations among constructs offering evidence of discriminant validity (see Table 2). Zero-order correlations among the study variables are outlined in Table 2.

The results (see Table 3, Model 3 versus Model 4) illustrate that the change in  $F$  value when including the quadratic terms is statistically significant ( $\Delta F = 3.25$ ,  $p = .022$ ). Mimicking Study 1, the curvature along the line of

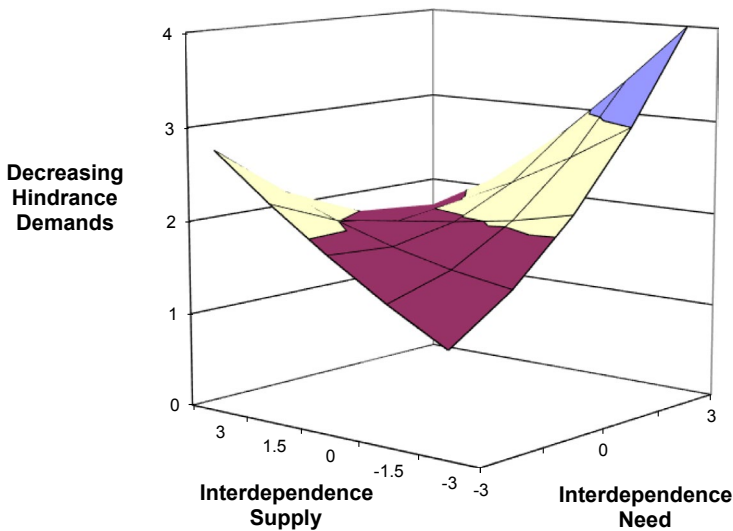


FIGURE 2. Study 2 task interdependence incongruence on decreasing hindrance demands. [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

incongruence was positive and significant ( $a_4 = .16$ , 95% CI [.030, .310]) and the surface plot (see Figure 2) illustrates that DHD increases when there is excess and deficient task interdependence. These findings replicate Study 1 and offer additional support for Hypothesis 1.

With respect to the potential moderating effect of autonomy, there is a significant change in  $F$  value ( $\Delta F = 3.29$ ,  $p = .006$ ) when adding the five moderation terms to the model (see Table 3, Model 5 versus Model 6), indicating a significant moderation effect (Edwards, 1996). Thus, we then evaluated the polynomial regression results at high and low levels of autonomy. As expected, when autonomy is high (see Table 2, Model 7) the positive curvature along the line of incongruence remains significant ( $a_4 = .25$ , 95% CI [.050, .467]). Additionally, the surface plot illustrates that DHD increases when task interdependence need and supply become more discrepant (see Figure 3). Alternatively, when autonomy is low (see Table 2, Model 8), the curvature is no longer significant ( $a_4 = .13$ , 95% CI [−.117, .392]). The surface plot illustrates that DHD does not increase when task interdependence supply is greater than interdependence need (see Figure 4). Thus, Hypothesis 2 is supported.

### Supplemental Analysis

In this study we draw upon person-job fit theory (Cable & DeRue, 2002) and misfit-as-motivation research to suggest that task interdependence

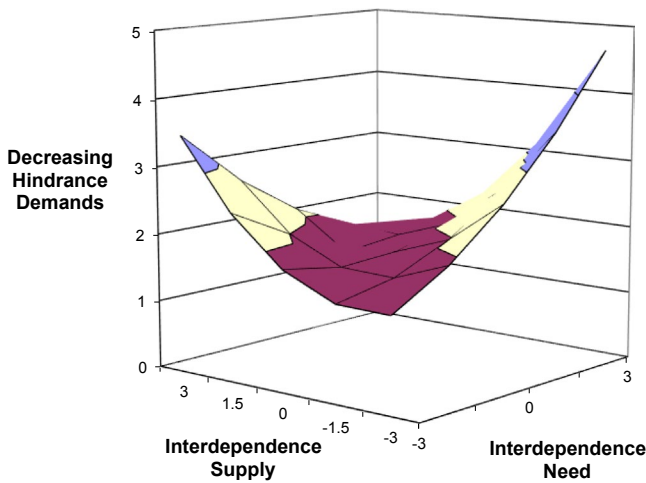


FIGURE 3. Study 2 task interdependence incongruence on decreasing hindrance demands at high levels of autonomy. [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

misfit motivates DHD. In our argumentation, DHD is the only dimension that should be affected by both forms of task interdependence misfit. To explore this position, we conducted supplemental analyses, replacing DHD with increasing social job resources, increasing structural job resources, and increasing challenging job demands. Regarding Hypothesis 1, the change in  $F$  value when including the quadratic terms was not statistically significant for increasing social job resources (Study 1:  $\Delta F = .093$ ,  $p = .964$ <sup>3</sup>; Study 2:  $\Delta F = 1.70$ ,  $p = .168$ ), increasing structural job resources (Study 2:  $\Delta F = 2.094$ ,  $p = .100$ ), or increasing challenging job demands (Study 1:  $\Delta F = .363$ ,  $p = .780$ ; Study 2:  $\Delta F = .456$ ,  $p = .713$ ). Therefore, the incongruence effect (i.e., Hypothesis 1) did not replicate when evaluating approach job crafting dimensions.

Regarding Hypothesis 2 (Study 2 only), when adding the five moderation terms to the model (indicating the potential for a moderated polynomial regression effect), there was a significant change in  $F$  value for increasing social job resources ( $\Delta F = 6.06$ ,  $p = .014$ ), but not for increasing structural job resources ( $\Delta F = 2.691$ ,  $p = .102$ ), or increasing challenging job demands ( $\Delta F = .278$ ,  $p = .598$ ). Specific to increasing social job resources, the findings illustrate that the curvature along the line of incongruence was not

<sup>3</sup> The job crafting measure used in Study 1 combines social and structural resources into one dimension. For simplicity, we have named this dimension increasing social resources.

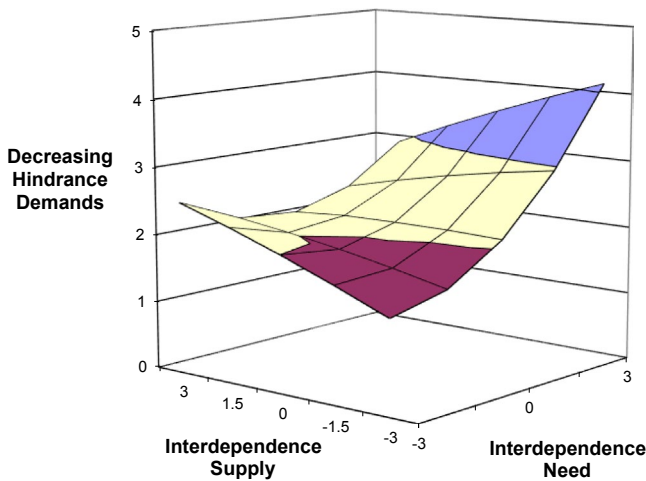


FIGURE 4. Study 2 task interdependence incongruence on decreasing hindrance demands at low levels of autonomy. [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

significant at low ( $a_4 = -.03$ , 95% CI  $[-.273, .149]$ );  $a_3 = .04$ , 95% CI  $[-.173, .241]$ ), medium ( $a_4 = .05$ , 95% CI  $[-.100, .170]$ );  $a_3 = -.01$ , 95% CI  $[-.176, .160]$ ), or high ( $a_4 = .13$ , 95% CI  $[-.063, .310]$ );  $a_3 = -.06$ , 95% CI  $[-.292, .178]$ ) levels of autonomy. Thus, there is no support for the hypothesis that autonomy interacts with task interdependence misfit for increasing social job resources. Instead, task interdependence need ( $b = .11$ , 90% CI  $[.020, .190]$ ) and supply ( $b = .12$ , 95% CI  $[.020, .190]$ ) are both directly related to increasing social job resources, and autonomy significantly moderates the direct effect of task interdependence need on increasing social job resources. Specifically, low autonomy increases ( $b = .21$ , 99% CI  $[.029, .400]$ ) and high autonomy neutralizes ( $b = .01$ , 95% CI  $[.124, .134]$ ) the effect. This suggests that low autonomy acts as a stimulus for the need to acquire social resources; when employees feel as if they have no control they are more likely to seek out the interdependence they desire by increasing social job resources.

## DISCUSSION

Both Study 1 and Study 2 findings reveal that DHD increases as task interdependence need exceeds task interdependence supply (i.e., undersupply) and when task interdependence supply exceeds task interdependence need (i.e., oversupply). These findings support our hypothesis that both forms of task interdependence misfit are positively associated with DHD. The Study

2 findings also reveal that autonomy moderates the misfit to DHD relationship. When autonomy is high, misfit acts as a motivator of DHD. However, when autonomy is low, misfit no longer has an effect on DHD. This finding supports our hypotheses that autonomy acts as a facilitator of the misfit to DHD relationship. The supplemental analyses for Study 1 and Study 2 did not reveal a relationship between misfit and any of the three expansive forms of job crafting. Interestingly, however, the Study 2 supplemental analyses did illustrate that autonomy interacts with task interdependence need such that when autonomy is low, task interdependence need is positively associated with DHD.

## Theoretical Implications

Job crafting theory suggests that misfit should motivate job crafting behavior. In our work we sought to empirically investigate this misfit-as-motivation hypothesis. Additionally, we sought to highlight that the integration of person-environment fit theory as it relates to job crafting is oversimplified. The assumption to date is that employees are not receiving enough of certain work characteristics. The findings of our study illustrate that employees decrease hindrance demands when task interdependence supply is less than or more than employees' preferred amount. Thus, we highlight that misfit can be multi-directional, such that not receiving enough (i.e., under-supply) or receiving too much (i.e. oversupply) of specific job characteristics can motivate job crafting. Although the focus of this study is specific, given our evaluation of task interdependence misfit and avoidance-oriented job crafting, this research offers the first empirical test of misfit-as-motivation to job craft from a multi-directional perspective.

Additionally, job crafting research mainly tests the direct effect of constructs originally conceptualized as personal (i.e., proactive personality) and contextual (i.e., autonomy) facilitators, that is, antecedents of job crafting. While it is useful to understand which personal dispositions and job characteristics relate to job crafting behavior, such investigations do not address a central tenet of job crafting theory; that person-job, need-supply misfit motivates job crafting behaviors (Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001). Thus, our work extends understandings of when and why job crafting occurs by simultaneously investigating a facilitator (i.e., autonomy) and a motivator (i.e., task interdependence misfit) of job crafting in the form of DHD.

This research also contributes to the JD-R perspective of job crafting by illustrating the nuanced role that autonomy plays as a job resource. This work illustrates that autonomy does more than facilitate DHD, it dictates whether the motivation to job craft impacts DHD. More specifically, while high levels

of autonomy allow the task interdependence misfit and DHD relationship to occur, low levels of autonomy neutralize this relationship. Thus, in alignment with JD-R theory, autonomy is a resource that facilitates the motivational processes that initiate job crafting, in this case, in the form of DHD.

This research also adds to the ongoing conversation regarding the effect of task interdependence on job crafting. Prior work has focused on supply arguments, suggesting that the degree to which a job entails task interdependence dictates whether employees perceive that job crafting is possible (Leana et al., 2009), or acceptable to colleagues (Tims, Bakker, & Derks, 2015). While task interdependence remains a critical (albeit unclear) facilitator of job crafting, this prior work overlooks the fact that individuals are likely to differ in their task interdependence preferences (Kelley et al., 1983). Our work highlights that future research should dedicate more attention to the alignment of task interdependence preferences with task interdependence supply.

Our research also has theoretical implications for work design theory and research. Prior work consistently suggests that enriched job designs (e.g., autonomy, connectedness, meaning) lead to heightened employee well-being (Humphrey et al., 2007). Work design scholars have cautioned that a positive, linear effect of job characteristics on well-being is oversimplified (Pierce & Aquinis, 2013; Warr, 1990). They argue that at higher levels of job characteristics, well-being may actually decrease. Our work illustrates that while employees may enjoy being interdependent with coworkers, extreme amounts may increase DHD, illustrating that there is utility in evaluating individual preferences for task interdependence in coordination with task interdependence supply. Thus, this research highlights that work design research in general, and task interdependence research in particular, should consider going beyond work characteristics supply and consider the joint effects of need and supply (see Stiglbauer & Kovacs, 2018, for a notable example). In doing so, work design research could go a step further and recognize that the inflection point where the TMGT effect occurs is unlikely to be universal, but contingent upon individual preferences.

## Practical Implications

Managers should pay particular attention to employees' task interdependence preferences and the potential for task interdependence misalignment, and consistently monitor employees' proactive attempts at reducing hindrances. From the organization's perspective, employees' attempts at reducing stressors could be beneficial because it could increase well-being (Tims & Bakker, 2010). However, employees who minimize contact with demanding colleagues, or evade intense and complex tasks, might be



neglecting some of their prescribed job responsibilities (Tims et al., 2015; Wrzesniewski & Dutton, 2001). Thus, organizations should be aware that employees with misaligned need-supply task interdependence might act in ways that conflict with organizational requirements. It is therefore important for managers to diagnose, evaluate, and negotiate mutually beneficial changes in coworker task interdependencies.

Understanding how and when job autonomy facilitates the job crafting process should also help managers seeking to ensure that job crafting leads to mutually beneficial outcomes. Our findings suggest that employees with low autonomy and task interdependence misfit may feel stuck. These employees are likely continually accumulating stressors from misaligned task interdependence because they feel incapable of making tangible alterations to tasks and relationships because of their lack of discretion. Managers should therefore embrace reciprocal dialogue with employees regarding unmet task interdependence needs.

This study also highlights the limitations of one-size-fits-all approaches to work design. Customizing work characteristics to meet each employee's needs would likely be inefficient because it would lead to role ambiguity and role conflict (Katz & Kahn, 1978). Thus, to find a balance between individual needs and organizational objectives, managers should consider implementing awareness-oriented job crafting activities. For example, managers could use the tailoring technique, which facilitates individualized feedback based on employee responses to the JD-R questionnaire (Tims & Bakker, 2010). Similarly, managers could use job crafting exercises and interventions (Van Wingerden, Bakker, & Derks, 2017) or assist employees in personal crafting plans (Van den Heuvel, Demerouti & Peeters, 2012) in order to increase employee self-awareness and manager awareness of an employee's unmet needs. These approaches align with the belief that managers and employees could be better equipped to construct mutually beneficial job changes.

## STUDY LIMITATIONS AND FUTURE RESEARCH

The implications of our study should be taken in light of its limitations. First, a potential concern is the external validity of our samples. Study 1 uses crowdsourcing and Study 2 uses student-recruitment. On the one hand, these approaches are ideal for evaluating our polynomial regression hypotheses because to properly test all potential misfit scenarios requires variability in task interdependence supply. Mechanical Turk (Behrend, Sharek, Meade, & Wiebe, 2011) and student-recruited (Wheeler, Shanine, Leon, & Whitman, 2014) samples are well-aligned with this need, given that respondents are typically from a wide variety of jobs, organizations, and industries. Although we did not verify this information by asking participants

to report job type or industry, prior studies using these approaches do illustrate such variability (e.g., Eddleston, Veiga, & Powell, 2006; Grant & Mayer, 2009; McElroy, Summers, & Moore, 2014; Mitchell, Vogel, & Folger, 2015; Morgeson & Humphrey, 2006; Zapata, Olsen, & Martins, 2013). On the other hand, these samples may be suspect to selection bias (Kalton, 1983). For the Mechanical Turk sample in Study 1, the average age (29.10 years) was relatively low. Additionally, although pre-Master's students in Study 2 were encouraged to recruit a diversity of ages (and background), the average age (39.70 years) was slightly below the country average of 41.9 years (Centraal Bureau voor de Statistiek, 2018). Notably, however, a substantial portion of the sample was 30 years old or more in Study 1 (37%) and in Study 2 (43%). Additionally, research comparing Mechanical Turk to a variety of alternative survey populations (Behrend et al., 2011; Buhrmester, Kwang, & Gosling, 2011; Paolacci, Chandler, & Ipeirotis, 2010) and student-recruited to non-student recruited samples suggests that the findings for each sample are similar (Wheeler et al., 2014). The primary issue, however, is that effect sizes in samples with a potential for selection bias may be skewed (Wheeler et al., 2014), making it challenging, practically speaking, to accurately gauge the relative impact of task interdependence misfit. DHD is an internal psychological coping mechanism that can be employed in any setting. Thus, compared to the approach job crafting dimensions, DHD should be less dependent upon job or industry. Nonetheless, future research should consider alternative sampling techniques.

A second limitation of the study is the cross-sectional design, which implies that the direction of causality is inconclusive. For example, perhaps unsuccessful attempts at job crafting causes employees to develop more extreme perceptions regarding the constraints of task interdependence supply. Longitudinal studies may help clarify this directionality question. Additionally, research suggests that job crafting relates to perceptions of fit (Lu, Wang, Lu, Du, & Bakker, 2014). Interestingly, Tims, Derks, and Bakker (2016) did not find that perceived person-job misfit predicted job crafting a week later. However, these authors examined general perceptions of person-job misfit and used an overall job crafting measure (including both approach- and avoidance-oriented job crafting) at the week-level. It is therefore important to evaluate whether a longitudinal approach may uncover the potential for ongoing, reciprocal relationships between more specific forms of need-supply misfit and job crafting, notably, task interdependence misfit and DHD.

A cross-sectional design is also susceptible to common method bias (CMB). We therefore incorporated several mechanisms suggested by Podsakoff, MacKenzie, and Podsakoff (2012) for minimizing CMB. We created temporal separation by spacing the task interdependence need, task interdependence supply, autonomy, and DHD measures on different survey pages throughout

the survey. Additionally, the instructions explicitly and repeatedly stated that responses were anonymous, confidential, and only for research purposes. Our data and analyses also reduce CMB concerns given that CMB is less of a concern when evaluating interactions (Siemsen, Roth, & Oliveira, 2010).

Third, the underlying mechanisms inherent in the relationships between task interdependence and job crafting deserve additional attention. Asking respondents to separately evaluate need and supply is an atomistic approach to need-supply fit. Future research could combine this approach with a molar approach, which directly asks respondents for their perceptions of fit (Edwards et al., 2006). Doing so may uncover whether employees fully internalize misfit. Similarly, future research should consider the mechanisms relating task interdependence misfit to DHD. For example, scholars could evaluate employee's perceptions of need fulfilment (e.g., Deci, Ryan, Gagné, Leone, Usunov, & Kornazheva, 2001). It would also be interesting to examine employee perceptions of supervisors' and colleagues' reactions to their job crafting behaviors. A recent study among employee dyads provides evidence that colleagues are affected by the job crafting of others (Tims et al., 2015). The study shows that when an employee decreases hindering job demands, colleagues reported higher levels of workload and higher levels of conflict with the job crafting employee. These findings highlight the impact that job crafting may have on others, which would be especially relevant for employees in task interdependent work settings. Research that investigates these mechanisms will help clarify the elements of the work context that potential job crafters find salient and consciously evaluate when considering whether to initiate work design changes. Relatedly, this study is focused on individual crafting behaviors. Future research should also evaluate the relationships between task interdependence misfit, autonomy, and collaborative job crafting, whereby employees make integrative and mutually beneficial task and relationship changes with and through colleagues.

Fourth, in this study we focus on DHD and exclude the approach forms of job crafting, making our evaluations of job crafting behavior relatively narrow. Job crafting research reveals a clear trend; DHD, as an avoidance-oriented form of job crafting, acts differently than the other, approach-oriented forms of job crafting (Bruning & Campion, 2018; Demerouti & Peeters, 2018; Zhang & Parker, 2019). Specifically, meta-analytic evidence illustrates that DHD: (a) is not significantly correlated with the other dimensions; (b) has a substantially smaller factor loading ( $DHD = .047$ ) on the latent construct than the other dimensions (increasing challenging demands = .811, increasing social resources = .482, increasing structural resources = .641); (c) is the only dimension related to a prevention focus and unrelated to a promotion focus; and (d) is the only dimension related to turnover intentions and job strain, and unrelated to job satisfaction, engagement, and performance

(Rudolph, Katz, Lavigne, & Zacher, 2017). The four dimensions remain critical to the gestalt conceptualization of job crafting, but separately evaluating each dimension ensures that scholars do not oversimplify the nuanced nature of the construct (see also Zhang & Parker, 2019). Job crafting theory suggests that employees engage in job crafting when their job is misaligned with their needs (Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001). For the approach forms of job crafting—increasing social job resources, structural job resources, and challenging job demands—this misfit-as-motivation logic appears most suitable to job characteristic undersupply. DHD, as an avoidance-oriented form of job crafting, operates under a different premise. Its intent has more to do with dealing with misfit through active-oriented coping (regardless of whether it stems from undersupply or oversupply) and less to do with increasing job characteristics to meet one's needs. As discussed in our supplemental analyses, we did not find evidence that task interdependence misfit was related to the approach-oriented forms of job crafting. Nonetheless, future research should consider alternative job characteristics whereby misfit from an undersupply and oversupply perspective may lead to approach forms of job crafting.

Fifth, future research could explore the effect of different types of fit (opposed to misfit) on job crafting. Our goal was to investigate the misfit-as-motivation hypothesis. In turn, we evaluated the curvature along the line of incongruence, which tests whether DHD changes as task interdependence needs and supplies move from being aligned to misaligned. Interestingly, across each of our models (except Model 8 of Table 3), DHD was higher when fit occurred at high levels opposed to low levels of task interdependence (represented by a positive  $a_1$ ). This suggests that when employees prefer a low amount of task interdependence, and receive this preferred low amount, they are less likely to engage in DHD compared to when they prefer and receive a high amount of task interdependence. This might mean that although employees are technically fulfilled with respect to their needs for task interdependence, there is still the potential for stressors given the higher degree of psychological resources being applied in more interdependent settings. Relatedly, future research should also consider whether the relationship between fit and DHD is linear or curvilinear. Our findings did not reveal a clear trend with regard to the curvature along the line of congruence (see Table 3: positive, negative, and non-significant  $a_2$ ). Our assumption would be that fit at moderate levels would lead to higher levels of DHD than at high or low levels (represented by a negative  $a_2$ ), because at moderate levels it is more likely that employees are encountering relatively more scenarios where they incur too little or too much task interdependence.

Sixth, future research should collect more specific information surrounding the nature of the reduction in hindrance demands. Such behaviors could

be a deliberate and proactive form of coping, which has potential benefits for employee well-being, or it could represent demotivation and lack of interest (Chun Chu & Choi, 2005; Petrou et al., 2012; Zhang & Parker, 2019). Additionally, such behavior may differ with respect to the target of decreasing hindrances, such as tasks, peers, or supervisors. Along these lines, Demerouti and Peeters (2018) argue that employees can address misfit by not only decreasing hindrance demands, but also by optimizing demands. Through optimization, the goal is to make work more efficient. Optimizing is therefore a constructive approach to avoidance-oriented job crafting; an attempt to simplify and improve work processes, while also benefiting personally through reduced stressors. Decreasing hindrance demands, however, is arguably less constructive, whereby employees make work less physically, mentally, or emotionally intense without addressing the underlying source of the problem. Thus, future research should seek to expand and refine the DHD dimension. For example, it may be fruitful to evaluate facilitators and motivators for decreasing hindrances specific to social-, structural-, or work-oriented demands.

## CONCLUSION

By incorporating a more comprehensive application of person-job, need-supply misfit theory, we illustrate that DHD acts as a coping-oriented form of job crafting; a resource conservation reaction to both undersupply and oversupply. Additionally, work design research acknowledges that in addition to managers, employees are central actors in the work design process (Berg et al., 2010). Our hope is that future research begins to integrate the influence of both parties, such that the joint effects of management-supplied work characteristics and employee preferences for work characteristics, are simultaneously considered.

## REFERENCES

- Apple, M. (1982). *Education and power*. Boston, MA: Routledge & Kegan Paul.
- Baard, P.P., Deci, E.L., & Ryan, R.M. (2004). Intrinsic need satisfaction: A motivational basis of performance and well-being in two work settings. *Journal of Applied Social Psychology*, 34(10), 2045–2068.
- Bakker, A.B., Tims, M., & Derks, D. (2012). Proactive personality and job performance: The role of job crafting and work engagement. *Human Relations*, 65(10), 1359–1378.
- Bateman, T.S., & Crant, J.M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior*, 14(2), 103–118.
- Baumeister, R.F., & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529.

- Baumeister, R.F., Twenge, J.M., & Nuss, C.K. (2002). Effects of social exclusion on cognitive processes: Anticipated aloneness reduces intelligent thought. *Journal of Personality and Social Psychology*, 83(4), 817–827.
- Behrend, T.S., Sharek, D.S., Meade, A.W., & Wiebe, E.N. (2011). The viability of crowdsourcing for survey research. *Behavior Research Methods*, 43, 800–813.
- Berg, J.M., Wrzesniewski, A., & Dutton, J.E. (2010). Perceiving and responding to challenges in job crafting at different ranks: When proactivity requires adaptivity. *Journal of Organizational Behavior*, 31, 158–186.
- Blau, P.M. (1964). *Exchange and power in social life*. New York: John Wiley.
- Brislin, R.W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, 1(3), 185–216.
- Bruning, P.F., & Campion, M.A. (2018). A role–resource approach–avoidance model of job crafting: A multimethod integration and extension of job crafting theory. *Academy of Management Journal*, 61(2), 499–522.
- Buhrmester, M., Kwang, T., & Gosling, S.D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6, 3–5.
- Cable, D.M., & DeRue, D.S. (2002). The convergent and discriminant validity of subjective fit perceptions. *Journal of Applied Psychology*, 87(5), 875.
- Centraal Bureau voor de Statistiek. (2018, June 9). Retrieved from <http://statline.cbs.nl/StatWeb/publication/?VW=T&DM=SLNL&PA=80832NED&LA=NL>.
- Champoux, J.E. (1980). A three sample test of some extensions to the job characteristics model of work motivation. *Academy of Management Journal*, 23(3), 466–478.
- Chun Chu, A.H., & Choi, J.N. (2005). Rethinking procrastination: Positive effects of “active” procrastination behavior on attitudes and performance. *Journal of Social Psychology*, 145(3), 245–264.
- Courtright, S.H., Thurgood, G.R., Stewart, G.L., & Pierotti, A.J. (2015). Structural interdependence in teams: An integrative framework and meta-analysis. *Journal of Applied Psychology*, 100(6), 1825–1846.
- Crawford, E.R., LePine, J.A., & Rich, B.L. (2010). Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test. *Journal of Applied Psychology*, 95(5), 834–848.
- De Jonge, J., & Schaufeli, W.B. (1998). Job characteristics and employee well-being: A test of Warr's vitamin model in health care workers using structural equation modelling. *Journal of Organizational Behavior*, 19(4), 387–407.
- Deci, E.L., & Ryan, R.M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227–268.
- Deci, E.L., Ryan, R.M., Gagné, M., Leone, D.R., Usunov, J., & Kornazheva, B.P. (2001). Need satisfaction, motivation, and well-being in the work organizations of a former eastern bloc country: A cross-cultural study of self-determination. *Personality and Social Psychology Bulletin*, 27(8), 930–942.
- Demerouti, E. (2014). Design your own job through job crafting. *European Psychologist*, 19, 237–247.
- Demerouti, E., Bakker, A.B., Nachreiner, F., & Schaufeli, W.B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499–512.



- Demerouti, E., & Peeters, M.C. (2018). Transmission of reduction-oriented crafting among colleagues: A diary study on the moderating role of working conditions. *Journal of Occupational and Organizational Psychology*, 91(2), 209–234.
- Dierdorff, E.C., & Jensen, J.M. (2017). Crafting in context: Exploring when job crafting is dysfunctional for performance effectiveness. *Journal of Applied Psychology*, 103(5), 463–477.
- Eddleston, K.A., Veiga, J.F., & Powell, G.N. (2006). Explaining sex differences in managerial career satisfier preferences: The role of gender self-schema. *Journal of Applied Psychology*, 91(2), 437–445.
- Edwards, J.R. (1994). Regression analysis as an alternative to difference scores. *Journal of Management*, 20(3), 683–689.
- Edwards, J.R. (1996). An examination of competing versions of the person-environment fit approach to stress. *Academy of Management Journal*, 39(2), 292–339.
- Edwards, J.R., & Cable, D.M. (2009). The value of value congruence. *Journal of Applied Psychology*, 94(3), 654–677.
- Edwards, J.R., Cable, D.M., Williamson, I.O., Lambert, L.S., & Shipp, A.J. (2006). The phenomenology of fit: Linking the person and environment to the subjective experience of person-environment fit. *Journal of Applied Psychology*, 91(4), 802–827.
- Edwards, J.R., & Parry, M.E. (1993). On the use of polynomial regression equations as an alternative to difference scores in organizational research. *Academy of Management Journal*, 36(6), 1577–1613.
- Edwards, J.R., & Rothbard, N.P. (1999). Work and family stress and well-being: An examination of person-environment fit in the work and family domains. *Organizational Behavior and Human Decision Processes*, 77(2), 85–129.
- Folkman, S., Lazarus, R.S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R.J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology*, 50(5), 992–1003.
- Fornell, C., & Larcker, D.F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382–388.
- Gagné, M., & Deci, E.L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26(4), 331–362.
- Gefen, D., & Straub, D. (2005). A practical guide to factorial validity using PLS-Graph: Tutorial and annotated example. *Communications of the Association for Information Systems*, 16(1), 91–109.
- Grant, A.M., & Mayer, D.M. (2009). Good soldiers and good actors: Prosocial and impression management motives as interactive predictors of affiliative citizenship behaviors. *Journal of Applied Psychology*, 94(4), 900–912.
- Hobfoll, S.E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology*, 50(3), 337–421.
- Hooper, D., Coughlan, J., & Mullen, M.R. (2008). Structural equation modelling: Guidelines for determining model fit. *Journal of Business Research Methods*, 6, 53–60.



- Hu, L.T., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55.
- Humphrey, S.E., Nahrgang, J.D., & Morgeson, F.P. (2007). Integrating motivational, social, and contextual work design features: A meta-analytic summary and theoretical extension of the work design literature. *Journal of Applied Psychology*, 92, 1332–1356.
- Hutchison, P., Abrams, D., & Christian, J. (2007). The social psychology of exclusion. In D. Abrams, J. Christian, & D. Gordon (Eds.), *Multidisciplinary handbook of social exclusion research* (pp. 29–57). London: John Wiley & Sons Ltd.
- Ilardi, B.C., Leone, D., Kasser, T., & Ryan, R.M. (1993). Employee and supervisor ratings of motivation: Main effects and discrepancies associated with job satisfaction and adjustment in a factory setting. *Journal of Applied Social Psychology*, 23(21), 1789–1805.
- Kalton, G. (1983). *Introduction to survey sampling*. Beverly Hills, CA: Sage.
- Karasek, R.A. Jr. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, 24(2), 285–308.
- Katz, D., & Kahn, R.L. (1978). *The social psychology of organization*. New York: Wiley.
- Kelley, H.H., Berscheid, E., Christensen, A., Harvey, J.H., Huston, T.L., Levinger, G., McClintock, E., Peplau, L.A., & Peterson, D.R. (1983). *Close relationships*. New York: Freeman.
- Keltner, D., Gruenfeld, D.H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review*, 110(2), 265–284.
- Kiggundu, M.N. (1981). Task interdependence and the theory of job design. *Academy of Management Review*, 6(3), 499–508.
- Kiggundu, M.N. (1983). Task interdependence and job design: Test of a theory. *Organizational Behavior and Human Performance*, 31, 145–172.
- Kim, W.H., Ra, Y.A., Park, J.G., & Kwon, B. (2017). Role of burnout on job level, job satisfaction, and task performance. *Leadership and Organization Development Journal*, 38(5), 630–645.
- Kozlowski, S.W.J., & Bell, B.S. (2003). Work groups and teams in organizations. In: W.C. Borman, D.R. Ilgen, & R.J. Klimoski (Eds.), *Handbook of psychology: Industrial and organizational psychology* (Vol. 12, pp. 333–375). London: Wiley.
- Lazazzara, A., Tims, M., & de Gennaro, D. (in press). The process of reinventing a job: A meta-synthesis of qualitative job crafting research. *Journal of Vocational Behavior*.
- Leana, C., Appelbaum, E., & Shevchuk, I. (2009). Work process and quality of care in early childhood education: The role of job crafting. *Academy of Management Journal*, 52, 1169–1192.
- Lu, C.Q., Wang, H.J., Lu, J.J., Du, D.Y., & Bakker, A.B. (2014). Does work engagement increase person–job fit? The role of job crafting and job insecurity. *Journal of Vocational Behavior*, 84(2), 142–152.
- Lyons, P. (2008). The crafting of jobs and individual differences. *Journal of Business and Psychology*, 23, 25–36.

- Mainiero, L.A. (1986). Coping with powerlessness: The relationship of gender and job dependency to empowerment-strategy usage. *Administrative Science Quarterly*, 31(4), 633–653.
- Martin, R., & Wall, T.D. (1989). Attentional demand and cost responsibility as stressors in shopfloor jobs. *Academy of Management Journal*, 32(1), 69–86.
- McClelland, D.C. (1985). How motives, skills, and values determine what people do. *American Psychologist*, 40(7), 812–825.
- McElroy, J.C., Summers, J.K., & Moore, K. (2014). The effect of facial piercing on perceptions of job applicants. *Organizational Behavior and Human Decision Processes*, 125(1), 26–38.
- Meade, A.W., & Craig, S.B. (2012). Identifying careless responses in survey data. *Psychological Methods*, 17, 437–455.
- Mitchell, M.S., Vogel, R.M., & Folger, R. (2015). Third parties' reactions to the abusive supervision of coworkers. *Journal of Applied Psychology*, 100(4), 1040–1055.
- Morgeson, F.P., & Humphrey, S.E. (2006). The work design questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, 91, 1321–1339.
- Paolacci, G., Chandler, J., & Ipeirotis, P. (2010). Running experiments on Amazon Mechanical Turk. *Judgment and Decision Making*, 5, 411–419.
- Petrou, P., Demerouti, E., Peeters, M.C.W., Schaufeli, W., & Hetland, J. (2012). Crafting a job on a daily basis: Contextual correlates and the link to work engagement. *Journal of Organizational Behavior*, 33, 1120–1141.
- Pierce, J.R., & Aguinis, H. (2013). The too-much-of-a-good-thing effect in management. *Journal of Management*, 39(2), 313–338.
- Plomp, J., Tims, M., Akkermans, J., Khapova, S., Jansen, P., & Bakker, A.B. (2016). Career competencies and job crafting: How proactive employees influence their well-being. *Career Development International*, 21(6), 587–602.
- Podsakoff, P.M., MacKenzie, S.B., & Podsakoff, N.P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63, 539–569.
- Resick, C.J., Baltes, B.B., & Shantz, C.W. (2007). Person-organization fit and work-related attitudes and decisions: Examining interactive effects with job fit and conscientiousness. *Journal of Applied Psychology*, 92(5), 1446–1455.
- Rudolph, C.W., Katz, I.M., Lavigne, K.N., & Zacher, H. (2017). Job crafting: A meta-analysis of relationships with individual differences, job characteristics, and work outcomes. *Journal of Vocational Behavior*, 102, 112–138.
- Saavedra, R., Earley, P., & Van Dyne, L. (1993). Complex interdependence in task-performing groups. *Journal of Applied Psychology*, 78(1), 61–72.
- Schaubroeck, J., Ganster, D.C., Sime, W.E., & Dittman, D. (1993). A field experiment testing supervisory role clarification. *Personnel Psychology*, 46(1), 1–25.
- Schmidt, F.L., Hunter, J.E., & Outerbridge, A.N. (1986). Impact of job experience and ability on job knowledge, work sample performance, and supervisory ratings of job performance. *Journal of Applied Psychology*, 71(3), 432–439.
- Shanock, L.R., Baran, B.E., Gentry, W.A., Pattison, S.C., & Heggstad, E.D. (2010). Polynomial regression with response surface analysis: A powerful approach for examining moderation and overcoming limitations of difference scores. *Journal of Business and Psychology*, 25(4), 543–554.

- Shaw, J.D., & Gupta, N. (2004). Job complexity, performance, and well-being: When does supplies-values fit matter? *Personnel Psychology*, 57(4), 847–879.
- Sheldon, K.M., Ryan, R., & Reis, H.T. (1996). What makes for a good day? Competence and autonomy in the day and in the person. *Personality and Social Psychology Bulletin*, 22(12), 1270–1279.
- Siemsen, E., Roth, A., & Oliveira, P. (2010). Common method bias in regression models with linear, quadratic, and interaction effects. *Organizational Research Methods*, 13(3), 456–476.
- Spreitzer, G.M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal*, 38, 1442–1465.
- Spreitzer, G., & Sonenshein, S. (2003). Positive deviance and extraordinary organizing. In: K.S. Cameron, J.E. Dutton, & R.E. Quinn (Eds.), *Positive organizational scholarship* (pp. 207–224). San Francisco, CA: Berrett-Kohler.
- Stiglbauer, B., & Kovacs, C. (2018). The more, the better? Curvilinear effects of job autonomy on well-being from vitamin model and PE-Fit Theory perspectives. *Journal of Occupational Health Psychology*, 23(4), 520–536.
- Thompson, J.D. (1967). *Organizations in action*. New York: McGraw-Hill.
- Thorsteinson, T.J. (2003). Job attitudes of part-time vs. full-time workers: A meta-analytic review. *Journal of Occupational and Organizational Psychology*, 76(2), 151–177.
- Tims, M., & Bakker, A.B. (2010). Job crafting: Towards a new model of individual job redesign. *South African Journal of Industrial Psychology*, 36, 1–9.
- Tims, M., Bakker, A.B., & Derks, D. (2012). Development and validation of the job crafting scale. *Journal of Vocational Behavior*, 80, 173–186.
- Tims, M., Bakker, B.A., & Derks, D. (2014). Daily job crafting and the self-efficacy–performance relationship. *Journal of Managerial Psychology*, 29(5), 490–507.
- Tims, M., Bakker, A.B., & Derks, D. (2015). Examining job crafting from an interpersonal perspective: Is employee job crafting related to the well-being of colleagues? *Applied Psychology: An International Review*, 64, 727–753.
- Tims, M., Derks, D., & Bakker, A.B. (2016). Job crafting and its relationship with person-job fit and meaningfulness: A three-wave study. *Journal of Vocational Behavior*, 92, 44–53.
- Twenge, J.M., Catanese, K.R., & Baumeister, R.F. (2002). Social exclusion causes self-defeating behavior. *Journal of Personality and Social Psychology*, 83(3), 606–615.
- Van den Heuvel, M., Demerouti, E., & Peeters, M. (2012). Succesvol job craften door middel van een groepstraining. *Scherp in Werk*, 5, 27–49.
- Van Wingerden, J., Derks, D., & Bakker, A.B. (2017). The impact of personal resources and job crafting interventions on work engagement and performance. *Human Resource Management*, 56(1), 51–67.
- Vogel, R.M., Rodell, J.B., & Lynch, J.W. (2016). Engaged and productive misfits: How job crafting and leisure activity mitigate the negative effects of value incongruence. *Academy of Management Journal*, 59(5), 1561–1584.
- Wageman, R. (1999). The meaning of interdependence. In M. Turner (Ed.), *Groups at work: Advances in theory and research* (pp. 197–218). Hillsdale, NJ: Erlbaum.

- Warr, P. (1990). The measurement of well-being and other aspects of mental health. *Journal of Occupational Psychology*, 63(3), 193–210.
- Warr, P. (2011). *Work, happiness, and unhappiness*. New York: Psychology Press.
- Weber, M. (1947). Legitimate authority and bureaucracy. *The Theory of Social and Economic Organisation*, 328–340.
- Wheeler, A.R., Shanine, K.K., Leon, M.R., & Whitman, M.V. (2014). Student-recruited samples in organizational research: A review, analysis, and guidelines for future research. *Journal of Occupational and Organizational Psychology*, 87(1), 1–26.
- Williams, K.D. (2007). Ostracism. *Annual Review of Psychology*, 58, 425–452.
- Wong, C.S., & Campion, M.A. (1991). Development and test of a task level model of motivational job design. *Journal of Applied Psychology*, 76(6), 825–837.
- Wong, S., DeSanctis, G., & Staudenmayer, N. (2007). The relationship between task interdependency and role stress: A revisit of the Job Demands-Control model. *Journal of Management Studies*, 44, 284–303.
- Wrzesniewski, A., & Dutton, J. (2001). Crafting a job: Employees as active crafters of their work. *Academy of Management Review*, 26, 179–201.
- Xie, J.L., & Johns, G. (1995). Job scope and stress: Can job scope be too high? *Academy of Management Journal*, 38(5), 1288–1309.
- Zapata, C.P., Olsen, J.E., & Martins, L.L. (2013). Social exchange from the supervisor's perspective: Employee trustworthiness as a predictor of interpersonal and informational justice. *Organizational Behavior and Human Decision Processes*, 121(1), 1–12.
- Zhang, F., & Parker, S.K. (2019). Reorienting job crafting research: A hierarchical structure of job crafting concepts and integrative review. *Journal of Organizational Behavior*, 40(2), 126–146.